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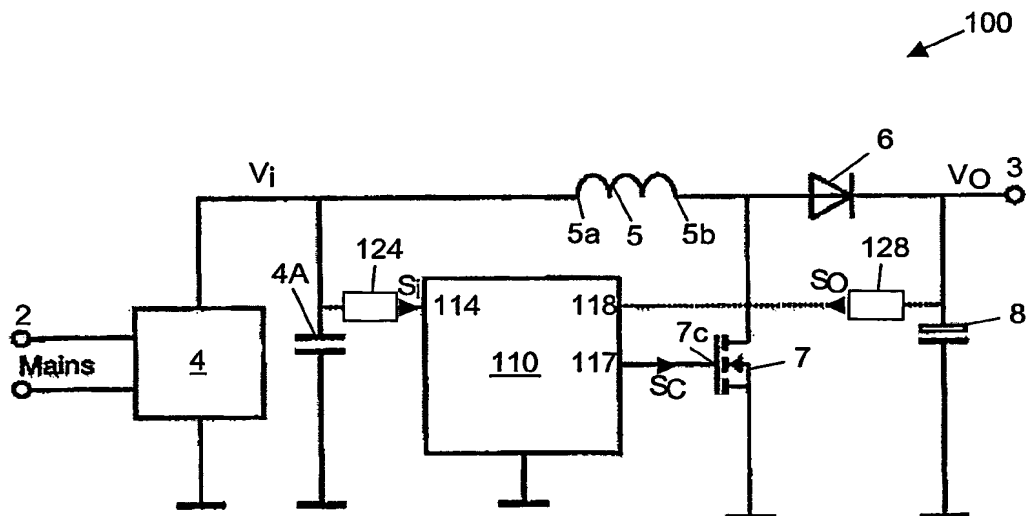
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**(54) Title:** POWER CONVERTER WITH DIGITAL SIGNAL PROCESSOR



**(57) Abstract:** An up-converter (100) comprises: an inductor (5) and a diode (6) connected in series with an output (3); a capacitor (8) connected in parallel to said output; a controllable switch (7) having one switch terminal coupled to a node between the inductor and the diode. A control method comprises the steps of feeding the inductor with a rectified AC voltage (Vi); and generating a switch control signal (Sc) having a pulse width (TH), for switching the switch open and closed; wherein the switch control signal is generated on the basis of the output voltage (Vo) at said output (3). According to the invention, the up-converter comprises a digital processor (110) which samples the output voltage (Vo), and digitally processes the sampled output voltage (Vo) to calculate the pulse width (TH) of the switch control signal (Sc) such that the output voltage (Vo) remains substantially constant.

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